

I CLAIM:

1. A hand-held computing device, comprising:
a slidably retractable keyboard and battery compartment cover, the cover having a pair of elongate slide members extending from forward opposing edges of the cover, the slide members for extending into a casing of the hand-held computing device for attaching the cover to the computing device;
a keyboard disposed along a lower front portion of the computing device;
a battery compartment disposed along a lower back portion of the computing device; and
whereby the keyboard and the battery compartment are uncovered for access by slidably retracting the cover away from the casing of the computing device.
2. The computing device of Claim 1, whereby the cover includes a hollow cavity for receiving and enclosing a lower portion of the computing device when the cover is in a closed position.
3. The computing device of Claim 1, whereby the keyboard is hidden from access inside the cover when the cover is in a closed position.
4. The computing device of Claim 1, whereby the battery compartment is hidden from access when the cover is in a closed position.
5. The computing device of Claim 1, whereby each of the elongate slide members has a detent defined along a forward portion of the slide member for engaging a detent catch disposed in the interior of the casing for retaining the slide members from exiting from the casing and separating from the casing when the cover is retracted to an open position.

6. The computing device of Claim 1, further comprising a pair of ball assemblies for allowing the slide members to slidably insert into and retract from the casing, each of the pair of ball assemblies including;

- a ball;
- a ball support; and
- a ball retaining arm;

whereby the ball is maintained in engagement with an inner surface of the slide members, and

whereby the ball retaining arm applies spring action against the ball structure for maintaining the ball in engagement with the inner surface of the slide members during movement of the slide member.

7. The computing device of Claim 1, whereby the keyboard and battery compartment cover and slide members are constructed of magnesium.

8. The computing device of Claim 1, whereby the battery compartment comprises:

a generally rectangular-shaped battery recess for enclosing a battery for powering the computing device, the battery compartment further including an interior battery cover for closing the battery recess to prevent the battery from dislodging from the battery recess when the keyboard and battery compartment cover is in an open position.

9. The computing device of Claim 8, whereby:

the interior battery cover has a first side and a second side;
each of the first and second slide members has an elongate track, the track running along a length of each of the first and second slide members along an inner side of each of the first and second slide members near an upper edge of each of the first and second slide members;

whereby an edge of the first side of the battery cover is slidably mounted within the elongate track of the first slide member and whereby an edge of the second side of the battery cover is slidably mounted within the elongate track of the second slide member; and

whereby the interior battery cover is slidably retractable to an open position by sliding the interior battery cover away from the battery recess and into the retracted keyboard and battery compartment cover.

10. The computing device of Claim 9, whereby the internal battery cover includes a detent defined in an upper surface of the interior battery cover for retracting the interior battery cover into the open position.

11. The computing device of Claim 10, whereby the internal battery cover further includes:

an interior battery cover closing member defined along a rear edge of the interior battery cover;

whereby the closing member is engaged by an interior surface of the keyboard and battery compartment cover such that the interior battery cover is closed by slidably closing the keyboard and battery cover and thereby pushing the closing member in a forward direction by engagement of the keyboard and battery compartment cover with the closing member.

12. The computing device of Claim 11, whereby the closing member engages a stop member defined at a rear section of the battery recess to prevent the interior battery cover from moving past a closed position.

13. The computing device of Claim 12, whereby the battery compartment includes a battery for powering the computing device, the battery including:

a generally rectangular shaped battery cell, the battery cell encased by an upper surface and a lower surface and a rounded forward end member connecting a forward edge of the upper surface with a forward edge of the lower surface; and

a battery removal member defined along a rear upper edge of the upper surface;

whereby the battery is removed from the battery compartment by lifting the battery removal member upward and by rotating a rear end of the battery upward about an access formed along the rounded forward end member.

14. The computing device of Claim 1, further comprising:

a stylus assembly mounted in an interior portion of a casing of the computing device, the stylus assembly including:

an elongate stylus having a first end and a second end, the stylus having a circumferentially defined detent near the second end;

a stylus release catch for engaging the detent to retain the stylus inside the casing of the computing device;

a spring-loaded stylus release button for disengaging the stylus release catch from the detent; and

a lower spring assembly for engaging the first end of the stylus and for urging the stylus out of the casing of the computing device when the stylus release catch is disengaged from the detent.

15. The stylus assembly of Claim 14, further comprising:

a stylus release, wherein the stylus release catch is defined at a forward end of the stylus release, and wherein the stylus release button is disposed along an outer surface of the stylus release; and

a spring guide mounted in the interior portion of the casing of the computing device in engagement with an inner surface of the stylus release, whereby downward movement of the stylus release against the spring guide urges the stylus release catch outward and disengages the stylus release catch from the detent.

16. The computing device of Claim 1, whereby the computing device is a hand-held personal computer.

17. The computing device of Claim 1, whereby the hand-held computing device of is a personal digital assistant.

18. A hand-held computing device comprising:

a slidably retractable keyboard and battery compartment cover, the cover having a pair of elongate slide members extending from four opposing edges of the cover, the slide members for extending into a casing of the hand-held computing device for attaching the cover to the computing device;

a keyboard disposed along a lower front portion of the computing device; and

a battery compartment disposed along a lower back portion of the computing device, the battery compartment including a generally rectangular-shaped battery recess for enclosing a battery for powering the computing device, the battery compartment further including an interior battery cover for closing the battery recess to prevent a battery contained in the battery recess from dislodging from the battery recess if the keyboard and battery compartment cover is in an open position;

whereby keyboard and battery compartment are uncovered for access to the keyboard and for access to the battery compartment by slidably retracting the keyboard and battery compartment cover away from the casing of the hand-held computer.

19. The computing device of Claim 18, whereby:

the interior battery cover has a first side and a second side;
each of the first and second slide members has an elongate track, the
track running along a length of each of the first and second slide members along an
inner side of each of the first and second slide members near an upper edge of each of
the first and second slide members;

whereby an edge of the first side of the battery cover is slidably mounted
within the elongate track of the first slide member and whereby an edge of the second
side of the battery cover is slidably mounted within the elongate track of the second
slide member; and

whereby the interior battery cover is slidably retractable to an open
position by sliding the interior battery cover away from the battery recess and into the
retracted keyboard and battery compartment cover.

20. The computing device of Claim 19, whereby the internal battery cover
further includes:

an interior battery cover closing member defined along a rear edge of the
interior battery cover;

whereby the closing member is engaged by an interior surface of the
keyboard and battery compartment cover such that the interior battery cover is closed
by slidably closing the keyboard and battery cover and thereby pushing the closing
member in a forward direction by engagement of the keyboard and battery compartment
cover with the closing member.

21. A hand-held computing device comprising:

a stylus assembly mounted in an interior portion of a casing of the computing device;

a slidably retractable keyboard and battery compartment cover, the cover having a pair of elongate slide members extending from four opposing edges of the cover, the slide members for extending into a casing of the hand-held computing device for attaching the cover to the computing device;

a keyboard disposed along a lower front portion of the computing device; and

a battery compartment disposed along a lower back portion of the computing device, the battery compartment including a generally rectangular-shaped battery recess for enclosing a battery for powering the computing device, the battery compartment further including an interior battery cover for closing the battery recess to prevent a battery contained in the battery recess from dislodging from the battery recess if the keyboard and battery compartment cover is in an open position;

whereby keyboard and battery compartment are uncovered for access to the keyboard and for access to the battery compartment by slidably retracting the keyboard and battery compartment cover away from the casing of the hand-held computer.

22. The computing device of Claim 21, whereby the stylus assembly comprises:

an elongate stylus having a first end and a second end, the first end being generally point shaped and having a circumferentially defined detent near the second end;

a stylus release catch for engaging the detent to retain the stylus inside the casing of the computing device;

a spring-loaded stylus release button for disengaging the stylus release catch from the detent; and

a lower spring assembly for engaging the first end of the stylus and for urging the stylus out of the casing of the computing device when the stylus release catch is disengaged from the detent.

23. The stylus assembly of Claim 22, further comprising:

a stylus release, wherein the stylus release catch is defined at a forward end of the stylus release, and wherein the stylus release button is disposed along an outer surface of the stylus release; and

a spring guide mounted in the interior portion of the casing of the computing device in engagement with an inner surface of the stylus release, whereby downward movement of the stylus release against the spring guide urges the stylus release catch outward and disengages the stylus release catch from the detent.